

Roll No. ....

## **BCA–S303**

### **Bachelor of Computer Applications (Third Semester)**

### **EXAMINATION, 2023-24**

#### **PROGRAMMING USING PYTHON**

*Time :  $2\frac{1}{2}$  Hours*

*Maximum Marks : 60*

**Note :** All questions have to attempted.

#### **Section—A**

1. Multiple choice questions : 1 each

(i) Python supports ..... control structures.  
(CO1, BL-2)

- (a) Selection
- (b) Repetition
- (c) Both (a) and (b)
- (d) None of the above

(ii) Which of the following is the correct extension of the Python file ? (CO2, BL-2)

- (a) .python
- (b) .py
- (c) .pl
- (d) .p

**P. T. O.**

(iii) What keyword would you add to an If statement to add a different condition ? (CO2, BL-1)

- (a) Else if
- (b) If else
- (c) elif
- (d) None of the above

(iv) Which of the following is not a Python loop ?

(CO2, BL-2)

- (a) for loop
- (b) do-while loop
- (c) white loop
- (d) None of the above

(v) Which of the following is correct with respect to OOP concept in Python ? (CO3, BL-2)

- (a) Objects are real world entities while classes are not real.
- (b) Classes are real world entities while objects are not real.
- (c) Both objects and classes are real world entities.
- (d) Both object and classes are not real.

(vi) In python, what is method inside class ?

(CO2, BL-2)

- (a) attribute
- (b) object
- (c) argument
- (d) function

(vii) Which of the following is not a SQL constraint ?

(CO5, BL-1)

- (a) UNIQUE
- (b) PRIMARY KEY
- (c) LOGICAL KEY
- (d) NOT NULL

(viii) What will be the minimum number of arguments require to pass in pandas series ? (CO5, BL-2)

- (a) 2
- (b) 3
- (c) 4
- (d) None of the above mentioned

(ix) What will be the output of following code ?

(CO2, BL-2)

```
import pandas as pnd  
pnd.Series([1,2], index= ['a','b','c'])
```

- (a) Syntax Error
- (b) Index Error
- (c) Value Error
- (d) None of the above mentioned

- (x) Suppose  $t = (1, 2, 4, 3)$ , which of the following is incorrect ? (CO3, BL-3)
- (a) `print(t[3])`
  - (b) `t[3] = 45`
  - (c) `print(max(t))`
  - (d) `print(len(t))`
- (xi) Is python case sensitive when dealing with identifiers ? (CO2, BL-2)
- (a) Yes
  - (b) None of the mentioned
  - (c) No
  - (d) Machine independent
- (xii) When will the else part of try-except-else be executed ? (CO4, BL-2)
- (a) always
  - (b) when an exception occurs
  - (c) when no exception occurs
  - (d) when an exception occurs in to except block
2. Attempt any *four* of the following (Short answer type questions) : 3 each
- (a) Define Lambda function with example. (CO1, BL-1)
  - (b) What are tuples and list in Python ? (CO1, BL-1)
  - (c) Define the *three* main applications of python. (CO2, BL-2)

- (d) How to create a histogram with several colors in matplotlib ? (CO4, BL-1)
- (e) Distinguish between public and private variables. (CO3, BL-4)

### Section—B

- 3. Attempt any *two* of the following : 6 each
  - (a) Explain the following terms with examples of each : (CO2, BL-2)
    - (i) Dictionaries
    - (ii) Matching vs. Searching
  - (b) What do you understand by type conversion ? Explain. (CO2, BL-1)
  - (c) What do you understand by function ? Explain with example. (CO3, BL-4)
- 4. Attempt any *two* of the following : 6 each
  - (a) Write a program to reverse the given integer number. (CO3, BL-6)
  - (b) How to create a Database in MySQL ? Explain with example. (CO5, BL-5)
  - (c) What are the different types of built in data types in Python ? Explain all with example. (CO2, BL-5)

5. Attempt any *two* of the following : 6 each

- (a) Define pandas. What are the significant features of the pandas library ? (CO3, BL-4)
- (b) Write a short note on conditional branching statements in python. (CO3, BL-2)
- (c) Write a program in python to plot a line chart to visualize the performance of the top 4 students in the six consecutive assessments with legend and title. (CO3, BL-2)